

CLAIMS:

1. A transmitter of a tire condition monitoring apparatus, wherein the transmitter is provided in a tire of a vehicle, the transmitter comprising:

a running state detection device for detecting a running state of the vehicle;

a transmission circuit, wherein the transmission circuit generates a transmission signal containing data representing a condition of the tire and outputs the transmission signal;

an antenna for wirelessly transmitting the transmission signal; and

a controller that changes a transmission power of the transmission circuit according to a detection result of the running state detection device.

2. The transmitter according to claim 1, wherein the running state detection device includes an acceleration sensor.

3. The transmitter according to claim 1, wherein the controller determines whether the vehicle is moving based on a detection result of the running state detection device, and wherein, when the vehicle is determined to be moving, the controller makes the transmission power of the transmission circuit greater than the transmission power when the vehicle is determined not to be moving.

4. The transmitter according to claim 1, wherein the running state detection device detects a parameter that correlates with a speed of the vehicle, and wherein the controller changes the transmission power of the transmission circuit according to the speed of the vehicle.

5. The transmitter according to claim 4, wherein the controller increases the transmission power of the

transmission circuit for a greater value of the speed of the vehicle.

6. The transmission according to claim 4, wherein, when
5 the speed of the vehicle is greater than or equal to a
reference value, the controller makes the transmission power
of the transmission circuit greater than the transmission
power when the speed of the vehicle is less than the reference
value.

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7. A transmitter of a tire condition monitoring
apparatus, wherein the transmitter is attached to a vehicle
wheel to be located inside a tire, the transmitter comprising:
a detection device for detecting that the transmitter is
15 attached to the wheel;

a transmission circuit, wherein the transmission circuit
generates a transmission signal containing data representing a
condition of the tire and outputs the transmission signal;

20 an antenna for wirelessly transmitting the transmission
signal; and

a controller that changes a transmission power of the
transmission circuit according to a detection result of the
detection device.

25 8. The transmitter according to claim 7, wherein the
detection device is a switch that is switched to different
states when the transmitter is attached to the wheel and when
the transmitter is detached from the wheel.

30 9. The transmitter according to claim 7, wherein, when
the transmitter is attached to the wheel, the controller makes
the transmission power of the transmission circuit greater
than the transmission power when the transmitter is detached
from the wheel.

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10. A transmitter of a tire condition monitoring apparatus, wherein the transmitter is provided in a tire of a vehicle and wirelessly transmits data representing a condition of the tire, the transmitter comprising:

5 a transmission circuit, wherein the transmission circuit generates a transmission signal containing data representing a condition of the tire and outputs the transmission signal;

 an antenna for wirelessly transmitting the transmission signal; and

10 a controller for detecting whether the antenna is detuned, wherein the controller changes a transmission power of the transmission circuit according to a detection result.

11. The transmitter according to claim 10, wherein, when the transmission antenna is determined to be detuned, the controller makes the transmission power of the transmission circuit greater than the transmission power when the transmission antenna is determined not to be detuned.

20 12. A method for controlling a transmission power, the method being applied to a transmitter of a tire condition monitoring apparatus, wherein the transmitter is provided in a tire of a vehicle and includes a transmission circuit and an antenna, wherein the transmission circuit generates a transmission signal containing data representing a condition of the tire and outputs the transmission signal, and wherein the antenna wirelessly transmits the transmission signal, the method comprising:

30 detecting a running state of the vehicle with a running state detection device; and

 changing a transmission power of the transmission circuit according to a detection result of the running state detection device.